DEPARTMENT ♦ OF ♦ WATER ♦ RESOURCES

CALIFORNIA WATER PLAN

♦ UPDATE 2003 ♦

Procedure for Using GIS to Calculate 2000 Census Data

The following procedures are a general guide to the approach the Water Use unit took, in cooperation with the DWR demographer, to modernize the population analysis process. This process used data from the 2000 US Census Bureau along with ArcView3.x shape files (themes). The pre-existing TIGER 2000 shape files with their associated database files (in DBF 4 format) were expanded to include total population numbers at the smallest level, block group.

The first step is to retrieve the data from the US Census 2000 Data Engine. On the tab titled *Pick Geography* you choose how to separate out your data (see figure 1).

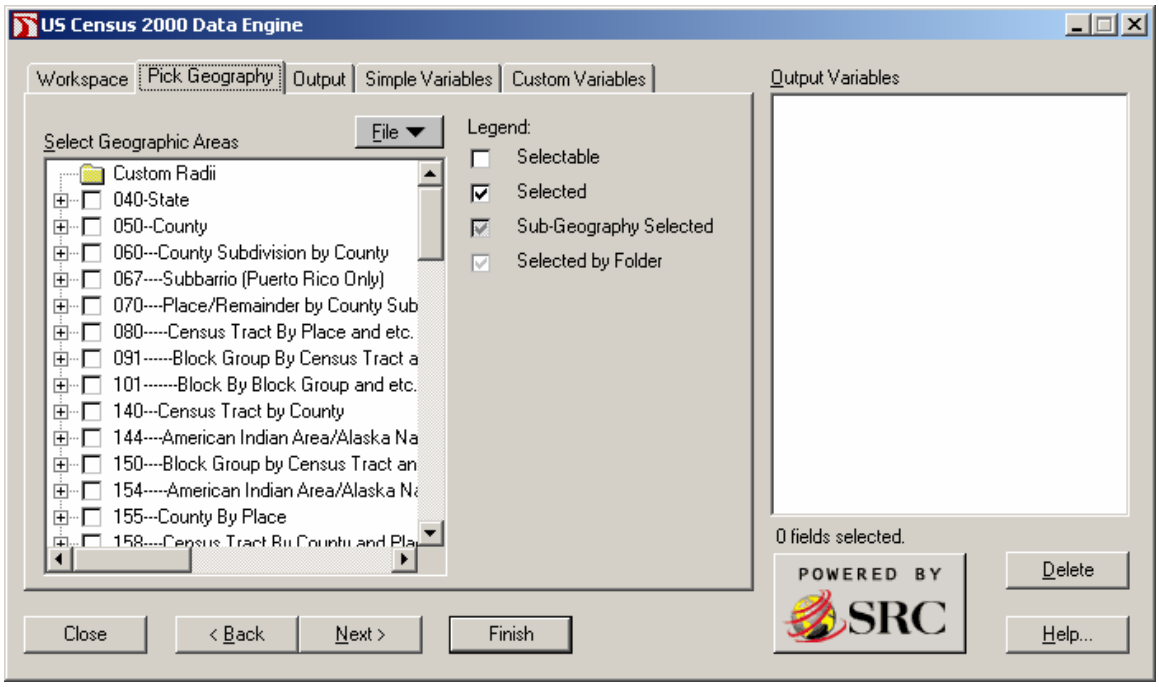

Figure 1.

In the *Select Geographic* Area window, we chose *101---Block by Block Group and etc* (see figure 2). Within that sub-category, choose the State you wish to query, the County within the State, the County Subdivision with the County, and so on. We chose only to go to the County level, (except with Los Angeles as the number of blocks within the county are too large for the Data Engine to work with).

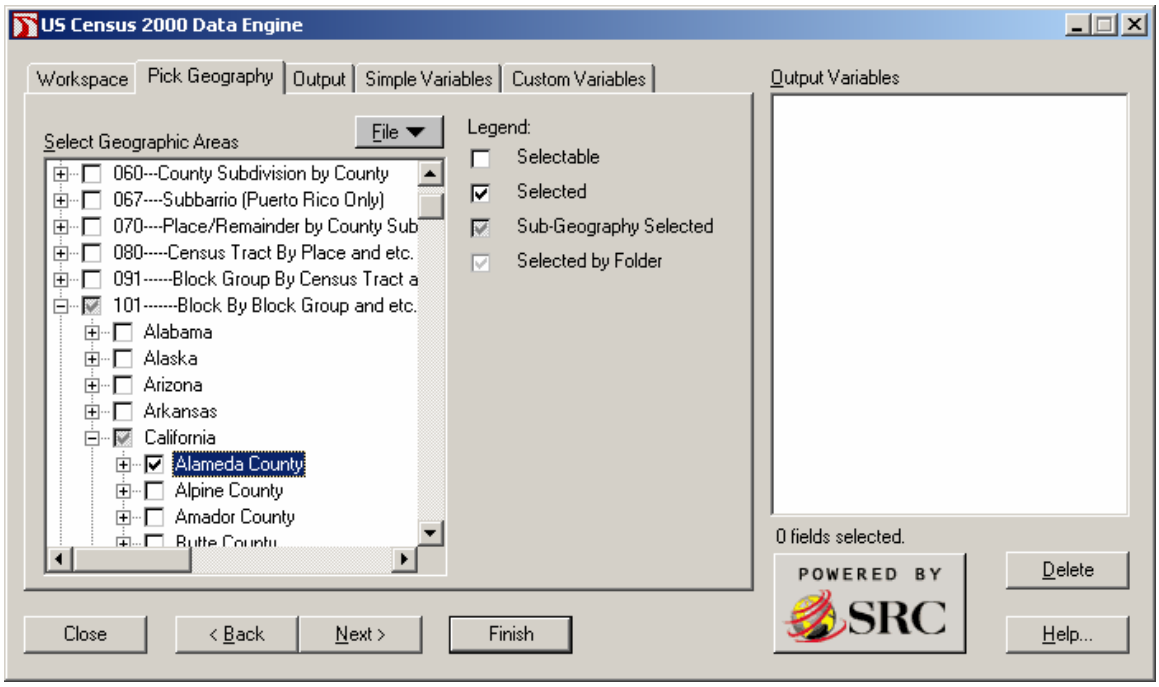

Figure 2.

The next tab is the *Output* (see figure 3). Here you select where and how the output is to be stored and viewed. By default the data engine uses HTML; but you are given the choice of a .DBF file, .MDB (Access database file), and .XLS (Excel file) among others. For this task, we chose DBF 4 format as that is the format ArcView uses for data storage.

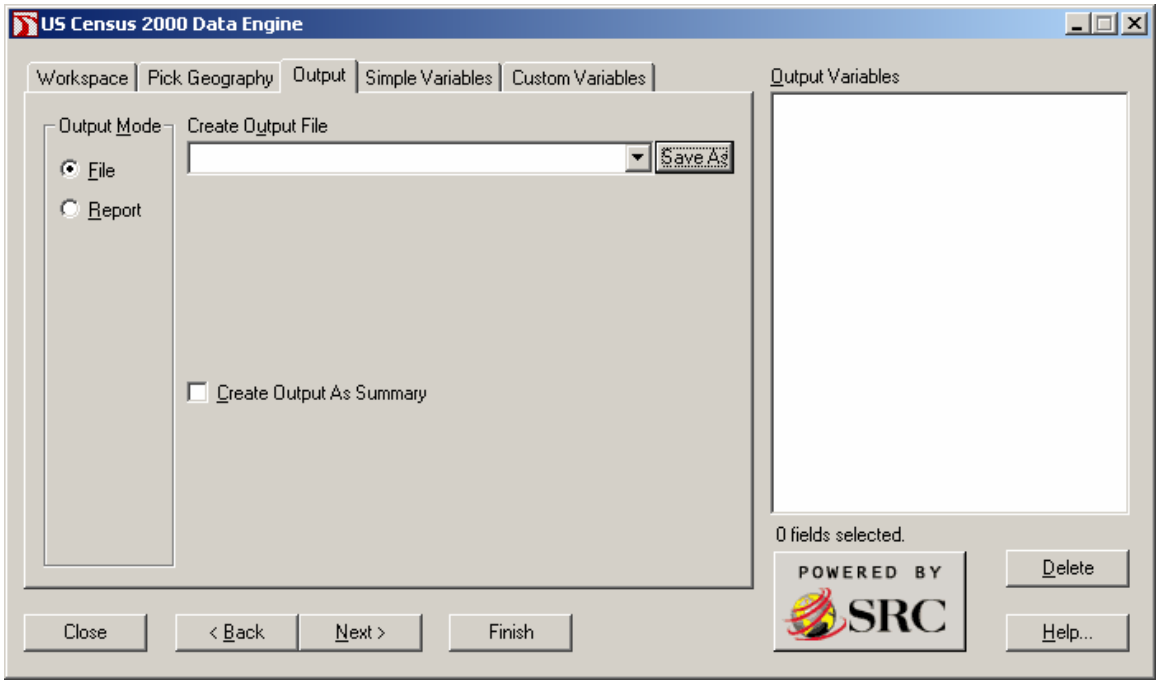

Figure 3.

Finally, we switched to the tab *Simple Variables* (see figure 4) where we selected the specific information we were seeking for the GIS. On the left window within the data engine reside 4 main types of data:

1. Geographic Identifiers--The first table gives you all the possible geographical distinctions for any given data set, i.e. State, County, Census Tract, etc.
2. H Tables—This table gives information on housing type, total occupancy, racial make-up, and so on.
3. P Tables—The P Table gives specific information on population from the sex of a person to the age and any associate breakdown.
4. PCT Tables—This final table gives information on the percentages. From the Sex and Age (including racial breakdowns) to number of people in a specific Group Quarters class.

For this portion of our query we used aspects of the *Geographical Identifiers* (GI) and the *P Table* (P) to retrieve our data. Within the GI we selected the following categories:

- State (FIPS Code)
- County
- County Subdivision (FIPS Code)
- Place (FIPS Code)
- Census Tract
- Block Group
- Block
- Population Count (100%)

For the *P* we used P37. Group Quarters Population By Group Quarters Type, specifically:

- P037003—Correctional Institutions
- P037002—Institutionalized Population
- P037008—Military Quarters

The window on the right side of the data engine under this tab shows your selected *Output Variables*.

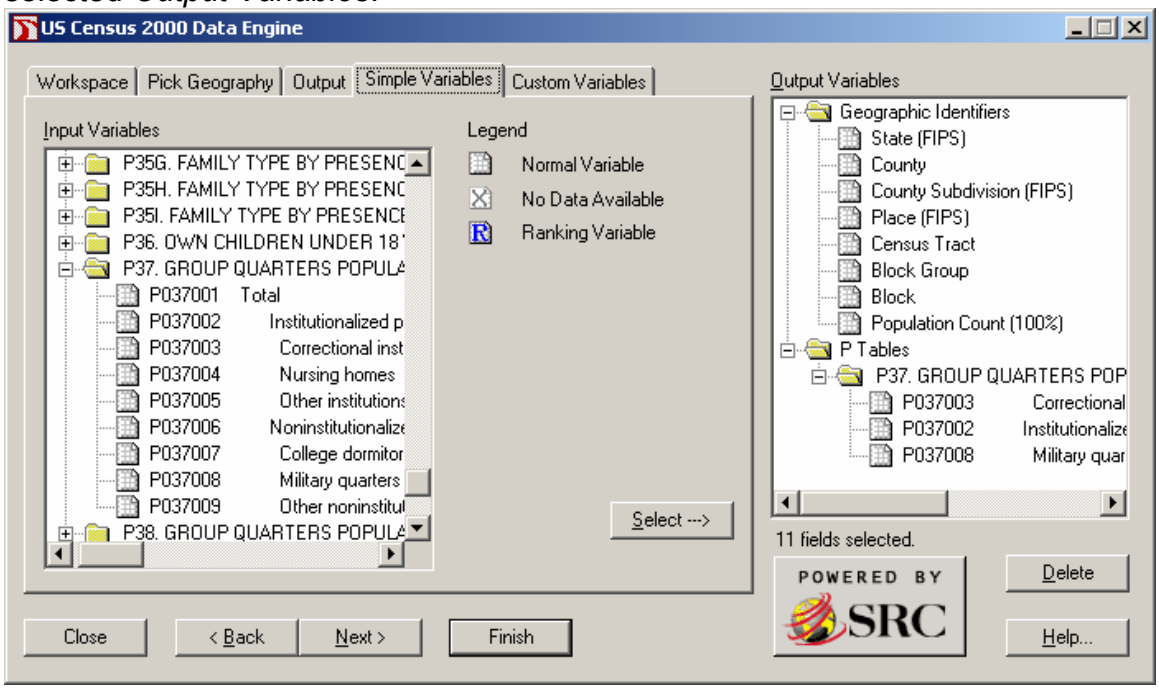

Figure 4.

All of the data has been selected and your output file is set. Click the *FINISH* button on the bottom center of the data engine. This process was completed for all 58 counties within the State.